

CLAIMS

1. A polynucleotide comprising all or a portion of the nucleotide sequence as set forth in SEQ ID NO: 1.
2. A primer set for detecting *Malephilus cerevisiae* consisting of an
5 oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 2 and an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 3.
3. A primer set for detecting and distinguishing beer-spoilage microorganisms, consisting of an oligonucleotide comprising the
10 nucleotide sequence as set forth in SEQ ID NO: 8, an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 3 and an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 6.
4. A probe set for detecting and distinguishing beer-spoilage
15 microorganisms, consisting of an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 4, an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 7 and an oligonucleotide comprising the nucleotide sequence as set forth in SEQ ID NO: 5.
- 20 5. A kit for detecting and distinguishing beer-spoilage microorganisms, comprising a primer set according to claim 3 and a probe set according to claim 4.
6. A method for detecting *Malephilus cerevisiae* by gene amplification comprising a step of amplifying a nucleic acid fragment using a primer
25 set according to claim 2 and a step of detecting the obtained nucleic acid fragment.

7. A method for detecting and distinguishing beer-spoilage microorganisms comprising a step of amplifying a nucleic acid fragment using a primer set according to claim 3 and a step of measuring the melting temperature of hybrids between the obtained
5 nucleic acid fragment and a probe set according to claim 4.